

REMARKS

Claims 17-23 are pending; claims 24-26 are withdrawn and claims 17-23 are rejected in this application. Claim 17 is amended hereby.

Responsive to the rejection of claims 17-20 and 23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,771,197 (Ivanto et al.) in view of Japanese Patent No. JP 54-1228905 (Yoshino), Applicant has amended claim 17 and submits that claims 17-20 and 23 are now in condition for allowance.

Ivanto et al. disclose a frequency converter-controlled squirrel cage motor (Fig. 1) including an axle 4 that is stationary. Axle 4 is fixed to stands 12, which conduct the support loads to the motor mounting base. On axle 4, stator 3 is integrally mounted and electrical leads 7 coming to stator 3 run through a cable entry 6 provided in axle 4. A cylinder 1 is rotatably carried on stationary axle 4 by way of end plates 13 and bearings 5 (column 1, line 62 through column 2, line 5).

Yoshino discloses a method to prevent a vibration of a conductor and to raise the cooling efficiency in that the rotor secondary conductor is made by aluminum die casting in such a way that a hollow form opening of the short circuit portion of an end ring is made and then a secondary conductor is formed with the end ring. Mold 1 includes a bar 1A and a ring plate 1B is set into ring groove 3 of female mold 6 provided with an aluminum charging hole 2. Secondary conductor 17 and end ring 16 enters hole 5 into which core metal 4 is set on its central part. A cylindrical band mold 7 is arranged on the outside circumference of rotor iron core 15. Male mold 10 is provided with a hole 8 into which is inserted core metal 4. Ring groove 9 into which is charged aluminum form in ring 16 and hole 10 into which is inserted bar 1A of mold 1 and is arranged on the upper part of iron core 15. Molten aluminum is injected into charging hole 2 for molding. The integral construction of the hollow conductor and the end ring increases the

mechanical strength of the conductor and also raises the cooling efficiency thereof (English Abstract of JP '541-22805).

In contrast, claim 7 as amended, recites in part:

said hollow short circuit conductors being in fluid communication with the hollow portion of said hollow non-rotary shaft.

(Emphasis added). Applicant submits that such an invention is neither taught, disclosed nor suggested by Ivanto et al., Yoshino or any of the other cited references, alone or in combination and include distinct advantages thereover.

Ivanto et al. discloses a frequency converter-controlled squirrel cage motor having a cylinder that is rotatably carried on a stationary axle. Yoshino discloses a hollow conductor integrally constructed with an end ring. In contrast, Applicant's invention includes a fluid communication between the hollow short circuit conductors and the hollow portion of the hollow non-rotary shaft of Applicant's invention. This limitation of Applicant's invention is supported at page 9, line 20 through page 10, line 6 in addition Fig. 1 illustrates the flow of air X flowing into an end of the hollow rotor shaft with part of it being diverted through a hole in the shaft thereby allowing flow through the hollow short circuit conductors and then the air rejoins the air flowing through the hollow rotor shaft and exits the motor. Therefore, Ivanto et al., Yoshino and any of the other cited references, alone or in combination, fail to disclose, teach or suggest a hollow short circuit conductor being in fluid communication with the hollow portion of the hollow non-rotary shaft, as recited in claim 17.

An advantage of Applicant's invention is that the air is routed in a parallel manner through both the hollow rotary shaft and hollow short circuit conductors. This allows an increase in the maximum output of the motor. Another advantage of the present invention is that it allows for an increased number of starts and stops of the motor. For the foregoing reasons, Applicant submits

that claim 17 and claims 18-20 and 23 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Claims 21 and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ivanto et al. in view of Yoshino and further in view of U.S. Patent No. 4,761,602 (Leibovich). However, claims 21 and 22 depend from claim 17, which is condition for allowance for the reasons given above. Accordingly, Applicant submits that claims 21 and 22 are now in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicant submits that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicant respectfully requests withdrawal of all rejections and allowance of the claims.

In the event Applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby conditionally petitions therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

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